

Application No. 09/883,833
Response to Office Action

Customer No. 01933

Listing of Claims:

Claims 1-9 (Canceled).

10. (Currently Amended) An imaging apparatus for
photographing a photographic subject, comprising:

an image pickup device for receiving light rays transferred
from the subject, a photographic subject image being formed on
5 the image pickup device, and the image being converted to an
original image signal;

designating means for designating one of first and second
gradation modes;

converting means for converting the original image signal
10 from said image pickup device to an output image signal in
accordance with the designated mode, said output image signal
having a first gradation in accordance with a first gradation
curve ~~in the designation of when~~ the first gradation mode is
designated, and a second gradation in accordance with a second
15 gradation curve ~~in the designation of when~~ the second gradation
mode is designated; and

adjusting means for adjusting a level of the original image
signal inputted to said converting means in accordance with the
designated mode, and maintaining an average level of the output

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20 image signal outputted from said converting means at a
substantially constant level;

wherein said first and second gradation property curves
intersect each other at a certain target signal value, and the
target signal value substantially corresponds to the average
25 output level of the output image signal.

11. (Original) The apparatus according to claim 10, wherein
the intersection of said property curves is determined to
correspond to 18 to 20% of a maximum signal level in a value on
an input side of a gradation converting property.

12. (Original) The apparatus according to claim 10, wherein
at least one of said first and second gradation property curves
has a knee property in which a knee point is set in a region
having a signal value larger than the signal value of the
intersection of said property curves.

13. (Currently Amended) An imaging apparatus for
photographing a photographic subject, comprising:

an image pickup device for receiving light rays transferred
from the subject, a photographic subject image being formed on
5 the image pickup device, and the image being converted to an
original image signal;

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designating means for designating one of first, second and third gradation modes; and

converting means for converting the original image signal
10 from said image pickup device to an output image signal in accordance with the designated mode, said output image signal having a first gradation in accordance with a first gradation curve ~~in the designation of when~~ the first gradation mode is designated, a second gradation in accordance with a second
15 gradation curve ~~in the designation of when~~ the second gradation mode is designated, and a third gradation in accordance with a third gradation curve ~~in the designation of when~~ the third gradation mode is designated;

wherein said first, second and third gradation property
20 curves intersect one another at a substantially same intersection point, which is determined to correspond to 18 to 20% of a maximum signal level in a value on an input side of a gradation converting property.

Claim 14 (Canceled).

15. (Currently Amended) The apparatus according to claim 13, wherein at least one of said first, second, and third gradation property curves has a knee property in which a knee

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point is set in a region having a signal value larger than ~~the~~
a signal value of the intersection point of said property curves.

Claims 16-19 (Canceled).

20. (Currently Amended) An imaging method for photographing
a photographic subject, comprising:

~~an imaging step of~~ receiving light rays from the
photographic subject, forming a photographic subject image, and
5 converting the image to an original image signal;

~~a designating step of~~ designating one of a first gradation
mode and a second gradation mode;

~~a converting step of~~ converting said original image signal
to an output image signal in accordance with the designation of
10 one mode ~~in the designating step~~, said output image signal having
a first gradation in accordance with a first gradation curve ~~in~~
~~the designation of~~ when the first gradation mode is designated,
and a second gradation in accordance with a ~~third~~ second
gradation curve ~~in the designation of~~ when the second gradation
15 mode is designated; and

~~an adjusting step of~~ adjusting a level of the original image
signal inputted to said converting ~~step~~ in accordance with the
designation of one mode ~~by said designating step~~, and maintaining

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an average level of the output image signal outputted from said
20 converting ~~step~~ at a substantially constant level;

wherein said first and second gradation property curves
intersect each other at a certain target signal value, and the
target signal value substantially corresponds to the average
output level of the output image signal.

21. (Original) The imaging method according to claim 20,
wherein the intersection of said property curves is determined to
correspond to 18 to 20% of a maximum signal level in a value on
an input side of a gradation converting property.

22. (Original) The imaging method according to claim 20,
wherein at least one of said first and second gradation property
curves has a knee property in which a knee point is set in a
region having a signal value larger than the signal value of the
5 intersection of said property curves.

23. (Currently Amended) An imaging method for photographing
a photographic subject, comprising:

~~an imaging step of~~ receiving light rays from the
photographic subject, forming a photographic subject image, and
5 converting the image to an original image signal;

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~~a designating step of~~ designating one of a first, second and third gradation modes; and

~~a converting step of~~ converting said original image signal to an output image signal in accordance with the designation of one mode ~~in the designating step~~, said output image signal having a first gradation in accordance with a first gradation curve ~~in the designation of~~ when the first gradation mode is designated, a second gradation in accordance with a second gradation curve ~~in the designation of~~ when the second gradation mode is designated, and a third gradation in accordance with a third gradation curve ~~in the designation of~~ when the third gradation mode is designated;

wherein said first, second and third gradation property curves intersect one another at a substantially same intersection point, which is determined to correspond to 18 to 20% of a maximum signal level in a value on an input side of a gradation converting property.

Claim 24 (Canceled).

25. (Currently Amended) The imaging method according to claim 23, wherein at least one of said first, second, and third gradation property curves has a knee property in which a knee

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point is set in a region having a signal value larger than the a
5 signal value of the intersection point of said property curves.

Claims 26-28 (Canceled).

29. (New) An imaging apparatus for photographing a subject,
comprising:

an image pickup device for receiving light rays transferred
from the subject, a photographic subject image being formed on
5 the image pickup device, and the image being converted to an
original image signal;

designating means for designating one of a first gradation
mode and a second gradation mode;

converting means for converting the original image signal
10 from the image pickup device to an output image signal in
accordance with the designated one of first and second gradation
modes, such that the original image signal is converted to the
output image signal with a first gradation characteristic when
the first gradation mode is designated, and such that the
15 original image signal is converted to the output image signal
with a second gradation characteristic when the second gradation
mode is designated; and

exposure controlling means for controlling an exposure level
of the photographic subject image in accordance with the

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20 designated mode, such that the exposure level is controlled to a
predetermined exposure level corresponding to a predetermined
brightness level when the first gradation mode is designated, and
such that the exposure level is controlled to the same
predetermined exposure level corresponding to a brightness level
25 different from the predetermined brightness level when the second
gradation mode is designated.

30. (New) An imaging method of photographing a photographic
subject, comprising:

receiving light rays transmitted from the photographic
subject, forming a photographic subject image, and converting the
5 image to an original image signal;

designating one of a first gradation mode and a second
gradation mode;

converting step of converting the original image signal to
an output image signal in accordance with the designated one of
10 first and second gradation modes, such that the original image
signal is converted to the output image signal with a first
gradation characteristic when the first gradation mode is
designated, and such that the original image signal is converted
to the output image signal with a second gradation characteristic
15 when the second gradation mode is designated; and

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controlling an exposure level of the subject image in
accordance with the designated mode, such that the exposure level
is controlled to a predetermined exposure level corresponding to
a predetermined brightness level when the first gradation mode is
20 designated, and such that the exposure level is controlled to the
same predetermined exposure level corresponding to a brightness
level different from the predetermined brightness level when the
second gradation mode is designated.